

PATENT

Application No.: 10/038,177

Attorney Docket No.: 42697.122US2

Amdt. dated November 18, 2003

Reply to Office Action of July 30, 2003

Amendments to the Specification:

Please replace the paragraph at page 7, lines 3-22 and continuing onto page 8, lines 1-3 with the following paragraph:

In a second aspect of the present invention, the invention provides a method for amplifying a complex population of mRNA molecules, comprising generating cDNA from a complex population of RNA molecules and *in vitro* transcribing the cDNA to ~~generated~~ generate amplified antisense RNA. The first-strand synthesis reaction for generating cDNA comprises a primer complementary to the mRNA molecules. In this aspect of the invention, the concentration of primer used to direct first-strand synthesis in step (a) does not exceed 0.2 μM in step (b). In at least some embodiments, the primer from step (a) is present at a concentration of no greater than 0.02 μM in step (b). In at least some other embodiments, the primer is present at a concentration of no greater than 1 μM in step (a). In at least some embodiments, the mRNA molecules are amplified from no more than 10 μg of total RNA, in at least some other embodiments, the mRNA molecules are amplified from no more than 5 μg of total RNA, in at least some other embodiments, the mRNA molecules are amplified from no more than 1 μg of total RNA, in at least some other embodiments the mRNA molecules are amplified from no more than 100 ng of total RNA, in at least some other embodiments, the mRNA molecules are amplified from no more than 10 ng of total RNA, and in at least some other embodiments, the mRNA molecules are amplified from no more than 2 ng of total RNA. In at least some embodiments, the mRNA molecules are amplified from the total RNA isolated from fewer than 1000 cells, in at least some other embodiments, the mRNA molecules are amplified from the

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total RNA isolated from fewer than 100 cells, in at least some other embodiments, the mRNA molecules are amplified from the total RNA isolated from fewer than 10 cells, and in at least some other embodiments, the mRNA molecules are isolated from the total RNA isolated from a single cell.